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The SFA Model for Electronically Signed Prom Notes

SFA has developed Standards for electronic signatures and electronic loan transactions. These standards have been written to support the use of electronic signatures based on guidance found in the Government Paperwork Elimination Act (GPEA) and the Electronic Signatures in Global National Commerce Act (E-SIGN). SFA has modeled a business process for its Direct Loan program using these standards along with consultation with the banking industry's best business practices to enable students to electronically sign their Master Promissory Notes (eMPNs) in a manner consistent with GPEA and E-SIGN.

The SFA process to electronically sign (eSign) eMPNs satisfies the Standard's requirements for borrower **consent**, electronic **signature**, **format**, **integrity**, **maintenance**, and **access**.

Consent. The student has a choice to sign a MPN electronically or on paper, and SFA as the lender is responsible for obtaining the borrower's consent to electronically sign eMPNs and maintaining a record of that consent. Borrower consent must occur before the borrower eSigns the eMPN and will include the required E-SIGN disclosures (borrower rights and procedures for using electronic records). The E-SIGN disclosures will be presented to the borrower before he/she gives consent. The method of consent will prove the student is capable of receiving electronic communications from SFA. Upon consent, SFA will save the date/time stamp of acceptance and store it as part of the eMPN electronic record. Required Privacy Act information will also be made available to the borrower throughout the eMPN process. If SFA wants to conduct another electronic loan transaction with the borrower, SFA will have to obtain the borrower's consent again in another session.

Signature. In accordance with E-SIGN and GPEA, SFA has selected the SFA PIN and typed name as the form of e-signature. These e-signature symbols and the process they are used in must reflect the borrower's *identity (attribution)* and *intent and purpose* for e-signature, must be *associated* with the eMPN, and must display the *terms and conditions* of the eMPN. The e-signature works in conjunction with saved transactions from the student aid process and saved data from the eMPN signing process to form the overall strength of the signature.

Regarding *identity* and *attribution*, the SFA PIN is linked to an authenticated borrower during the aid application process. SFA mails a PIN to the borrower with procedures to protect it only after confirming the borrower's identity with the Social Security Administration. Regarding *intent and purpose*, the entire eMPN is displayed twice before signature so there can be no doubt as to what the borrower is signing. First, the borrower sees his/her completed eMPN before entering a separate Signature Page where the borrower types

his/her name beneath the words of the eMPN's Promise to Pay. Then, the borrower sees his/her completed and signed eMPN before entering a separate final Acceptance Page. At this page, the borrower is given the chance to reject the completed e-signed eMPN. With respect to *association*, the typed signature name, the date/time of SFA PIN use and the date/time of final acceptance are linked with the completed eMPN file as part of the data elements in the electronic eMPN record stored at SFA. In addition to the completed MPN, the eMPN file will include a description page of all date/time stamped steps the borrower agreed to. And finally with respect to *terms and conditions*, SFA will display the Borrower's Rights and Responsibilities, and require the borrower to acknowledge reading them before signing the MPN. SFA will also save the date/time stamp of this acceptance click as part of the eMPN electronic record.

Format. SFA will use Adobe's Portable Document Format (PDF) to emulate the paper version of the MPN. Use of this format allows the borrower to view the MPN during the signing process and print or save the eMPN after signing it. SFA will also display the statement of Borrower's Rights and Responsibilities, and won't allow students to fill-out eMPNs until passing through this statement during the web session. The PDF file is self-contained, so when viewed or printed the MPN will show SFA PIN as the e-signature method as well as the date/time stamped steps the borrower agreed to. As a PDF file, the eMPN can be accessed for printing or saving at the borrower's request.

Integrity. The integrity of the eMPN is based on its PDF file's hash. The hash is a number mathematically generated from the bits and bytes of the PDF file. The number will be stored as a data element in the eMPN record. If the PDF file is altered, its hash will be different from the original stored hash, proving the eMPN was changed. The eMPN electronic record stored at SFA will be the authoritative copy of the eMPN and stored as read-only; all copies will be made from this authoritative copy. The well-established security controls of the SFA electronic record storage system also play a role in assuring eMPN integrity.

Maintenance. SFA will keep all eMPN records in an existing, centralized storage area with established security policies and procedures for access, transaction, and delivery controls that enhance the data's long-term survivability. The use of Adobe's commercial off-the-shelf PDF format also increases the long-term usability of the files by simplifying any conversion necessary in the future. The eMPN record will be completely electronic, but paper records generated from the aid application and disbursement process can be cross referenced to the electronic record by specific data elements within the electronic record.

Access. An SFA system administrator will assign role-based access controls for the centralized storage area. Borrowers, schools and SFA will have access to eMPNs from the time one is e-signed until three years after the loan is paid in full. Borrowers can print or save their eMPN at the time of e-signature, print or save a copy via the Internet at a later date, or request a paper copy mailed from the lender or current holder. If a loan enters default or is sold, the lender or holder's access rights to the electronic record will change accordingly.

In summary, SFA's planned eMPN process meets electronic signature standards. During the signing process, SFA follows **format** requirements and captures data as evidence of the

consent and electronic **signature** requirements described above. This evidence is stored as part of the eMPN record in adherence with the **integrity, maintenance** and **access** requirements. In the end, the strength of the e-signed promissory note comes from these stored components in the context of the overall student aid process.